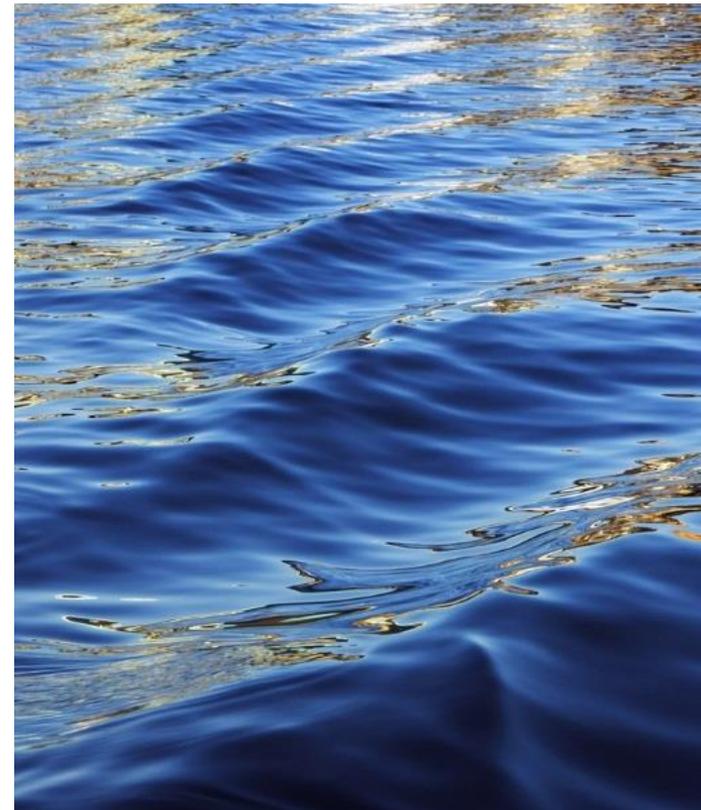




Umbrella Mitigation Banking Instrument

UMBI



What is an Instrument?

- Why do we need to protect wetlands?
- What have we done, so far?
- Why it won't continue to work?
- Where we are going?





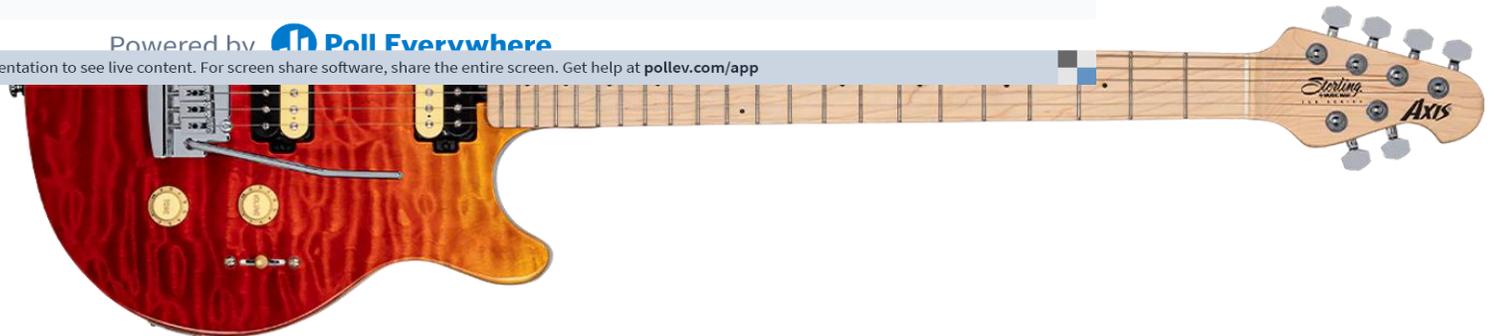
If Christopher Walken was to ask you for a recommendation for the "best" instrument for mitigating his percussion needs, what would be a good answer?

Snare drum **A**

Xylophone **B**

Cowbell **C**

Guitar **D**

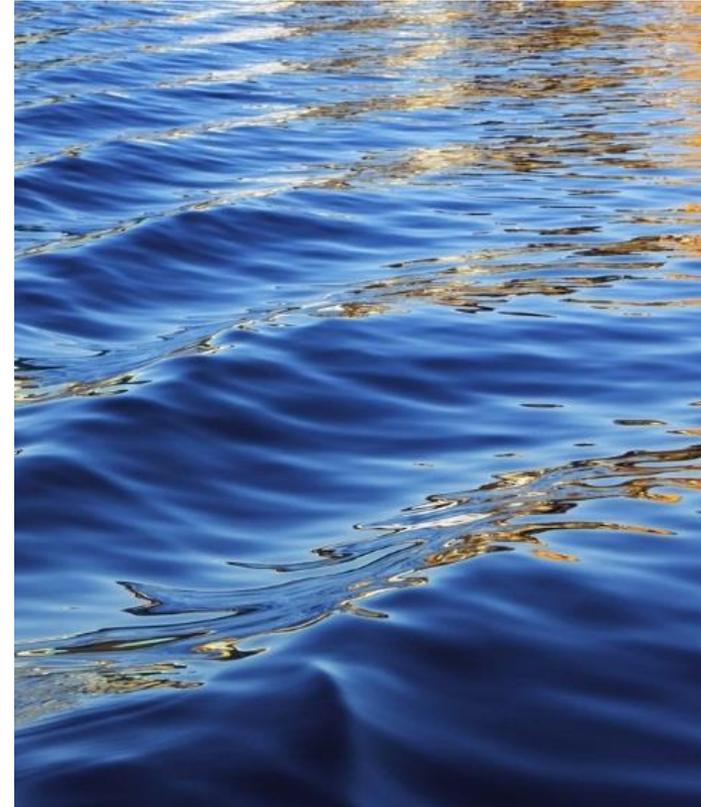


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Why do we need to
protect wetlands?



Why do we protect wetlands?

Because the law makes us!



Why do we protect wetlands?

Glenville Estates 2005

Repeated flooding with 140 homes severely damaged in the early 2000's led to the State of Delaware purchasing the homes, and led to Governor Minner issuing a declaration to State regulators to protect the citizens and State from flooding.



Why do we protect wetlands?

Glenville Estates 2008

Creation of the
Glenville Wetland
Mitigation Bank

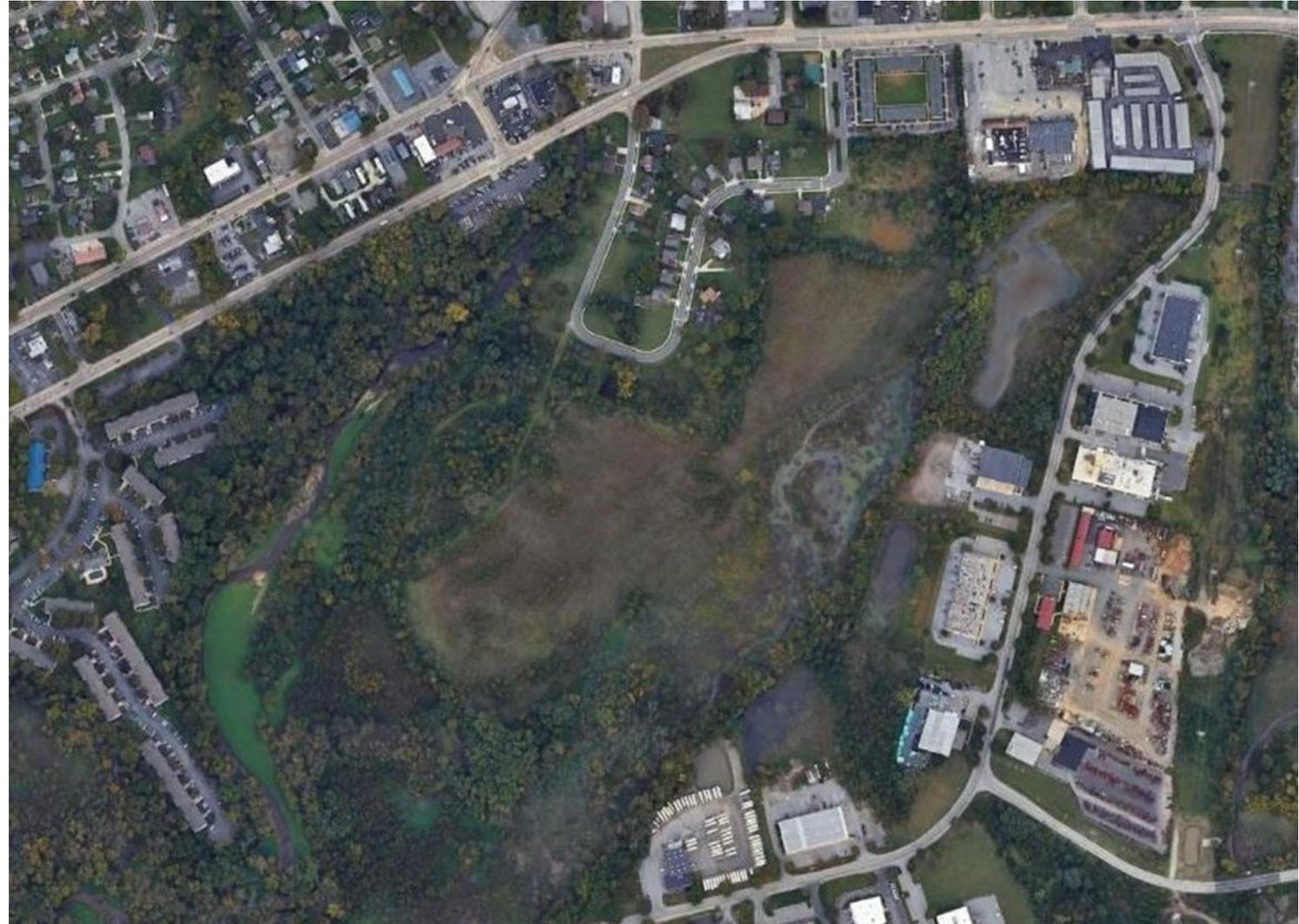
- 19.6 acres created
- 25 acre preservation
- 21.3 acres of transitional upland buffer



Why do we protect wetlands?

Glenville Estates

Glenville Wetland
Mitigation Bank - 2020

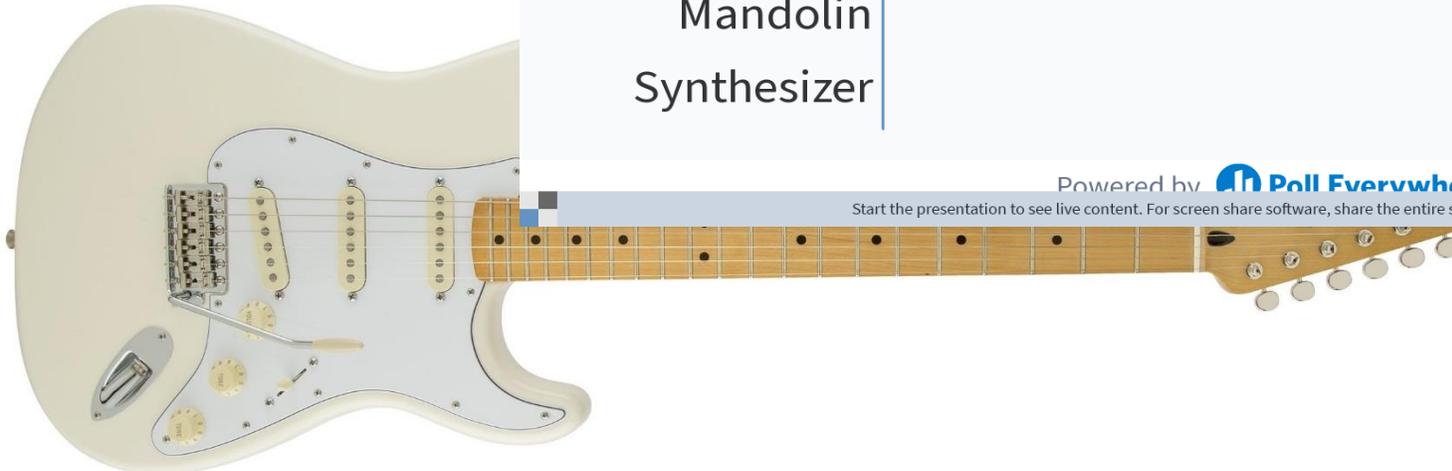


Why do we protect wetlands?

Glenville Estates

Glenville Wetland
Mitigation Bank - 2020





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Delaware's own; Jimi Hendrix is widely considered the most influential musician of the 20th century due to his affinity for which instrument?

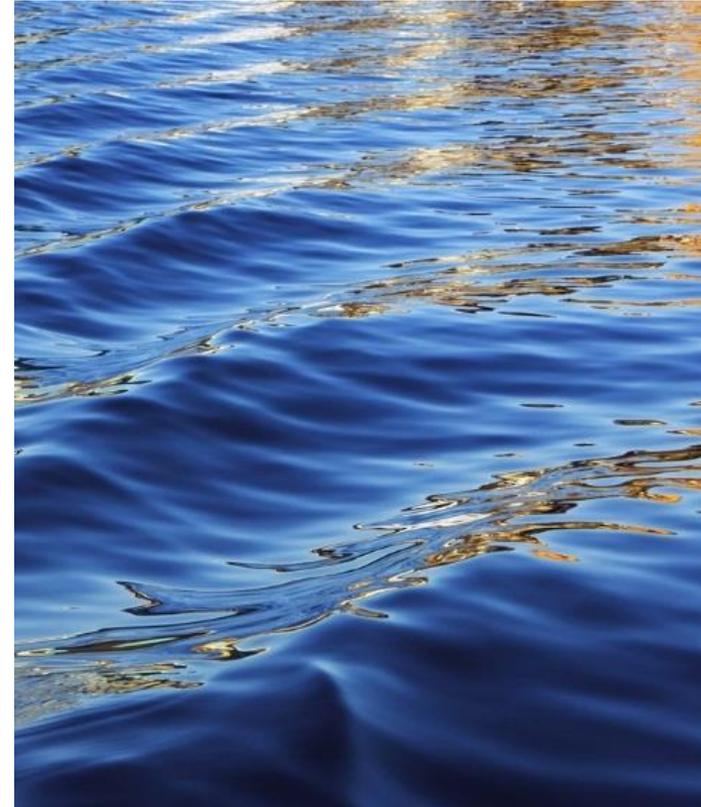
- Cowbell
- Electric Guitar
- Mandolin
- Synthesizer

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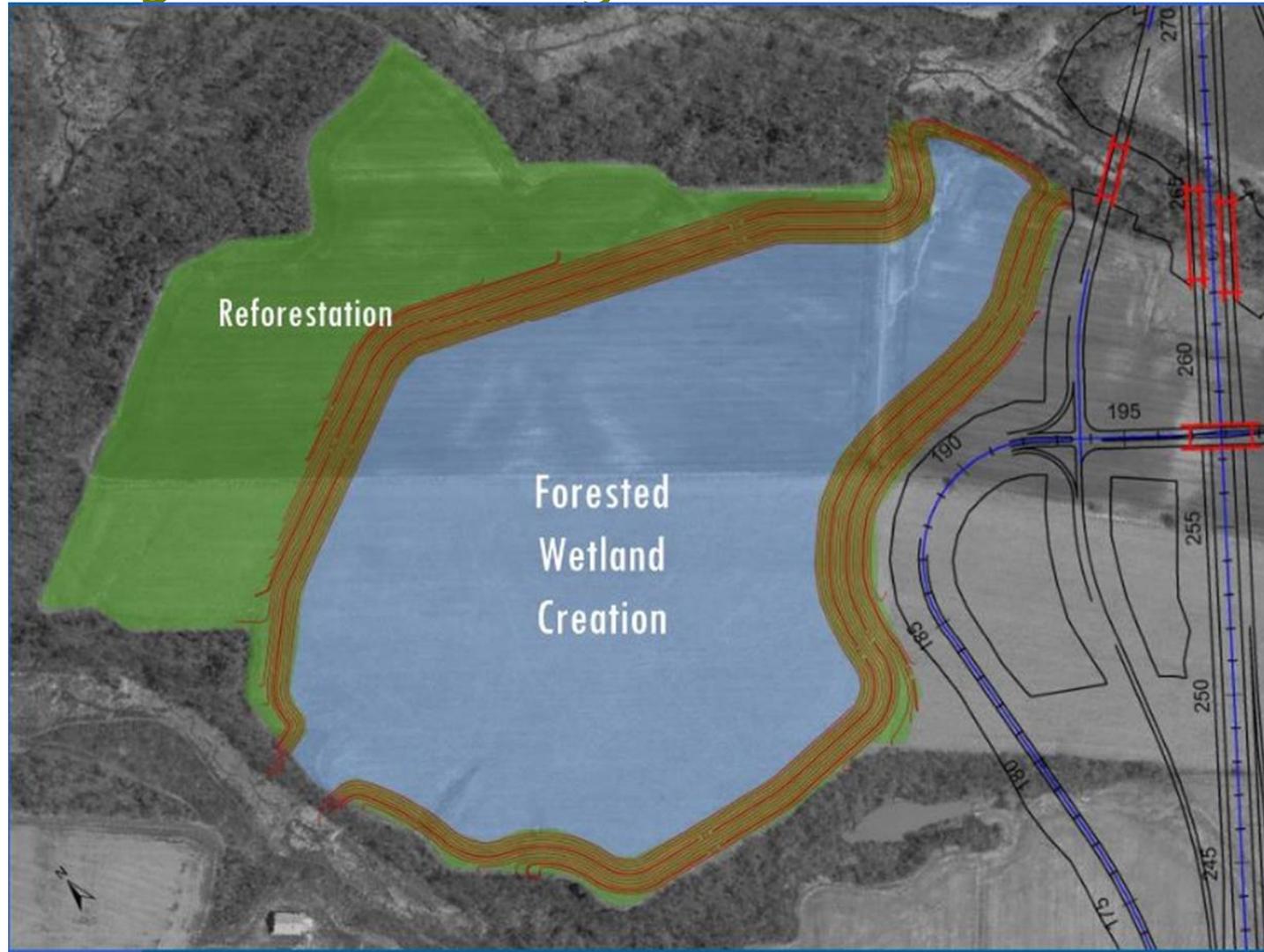
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What is the current
practice?



Current Practice – Project based Mitigation Route 301 Levels Mitigation Site – Middletown, DE



Current Practice – Project based Mitigation

Route 301 Levels Mitigation Site – Middletown, DE



Construction of
Beaver Pond
Leveler

Construction of low
flow channels in the
wetland outlet
structure



Current Practice – Project based Mitigation

Route 301 Levels Mitigation Site – Middletown, DE



Sapling plantings

Current Practice – Project based Mitigation

Route 301 Levels Mitigation Site – Middletown, DE



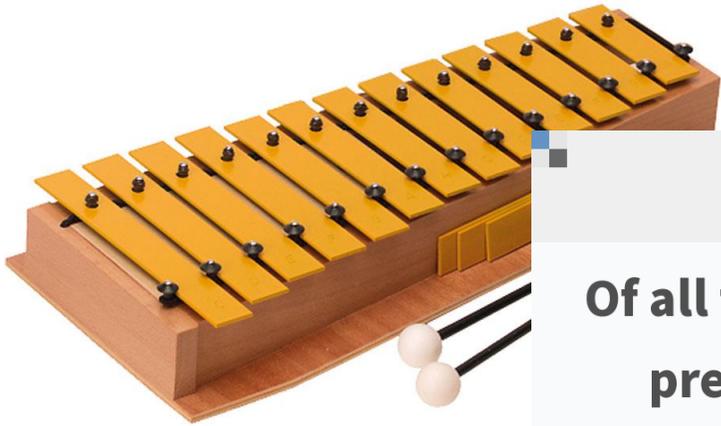
Levels Mitigation
Site - 2018

Current Practice – Project based Mitigation

Route 301 Levels Mitigation Site – Middletown, DE



Levels Mitigation
Aerial - 2022



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Of all the instruments, which has a name that makes you pretty sure that it is also a part of human anatomy?

Glockenspiel

Clavichord

Ocarina

Vuvuzela

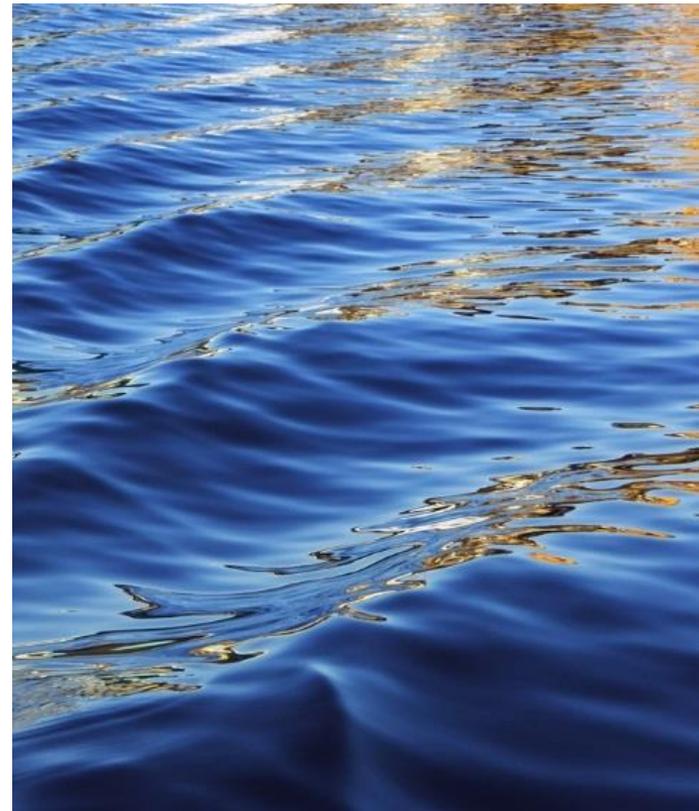


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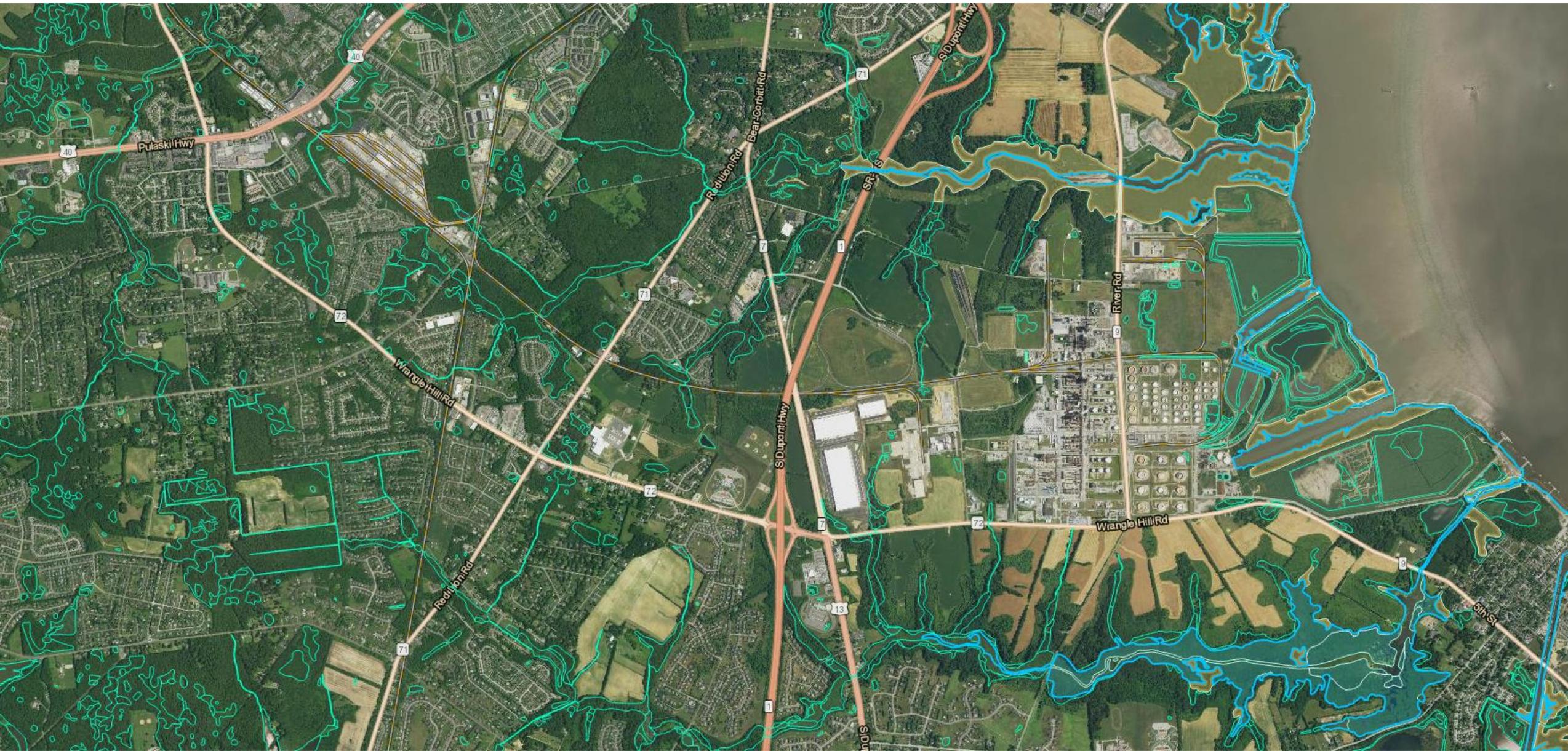
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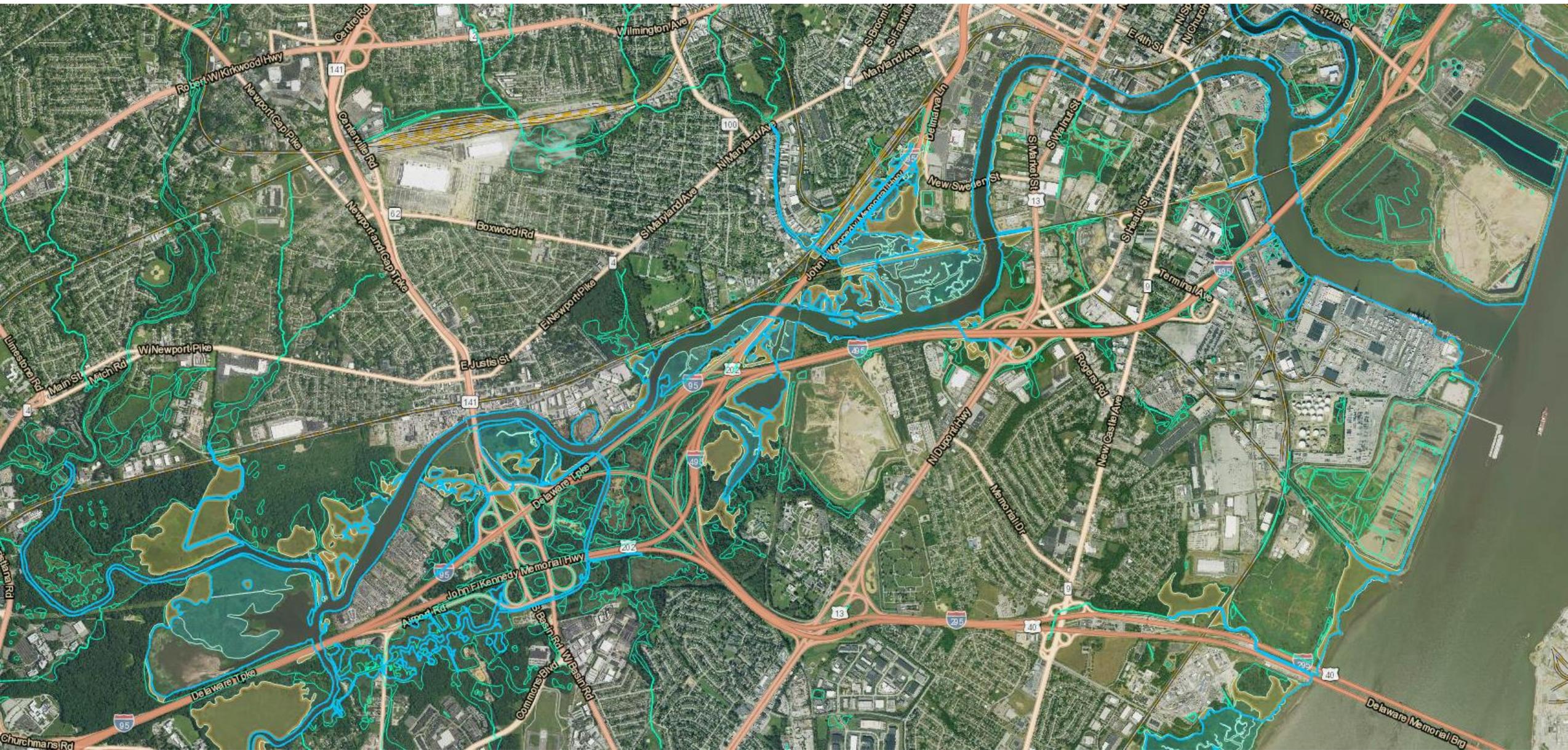


Why change?











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Does an instrument even exist, until we make it? Which of these instruments don't exist?

Nyckelharpa

Lur

Crwth

Didgeridoo

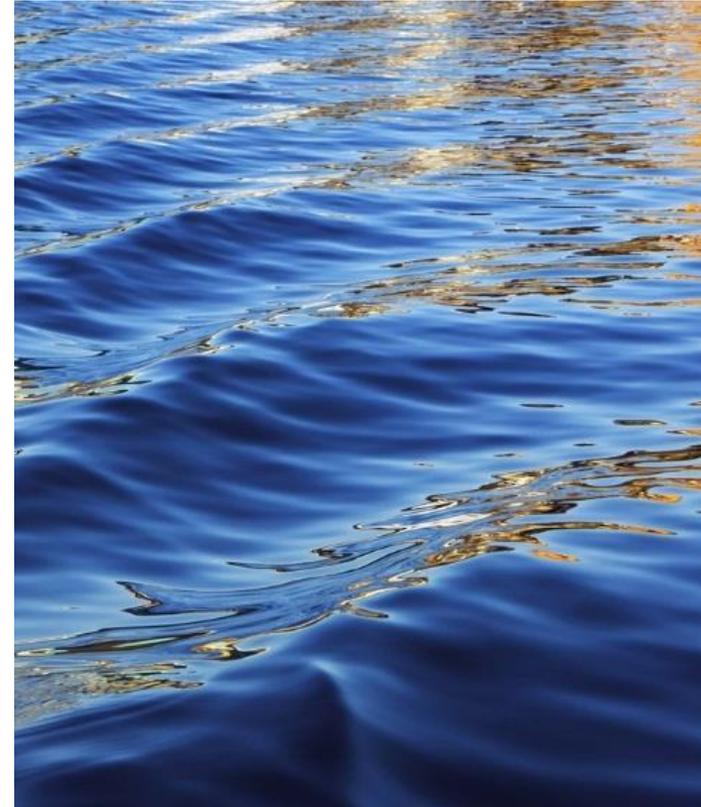


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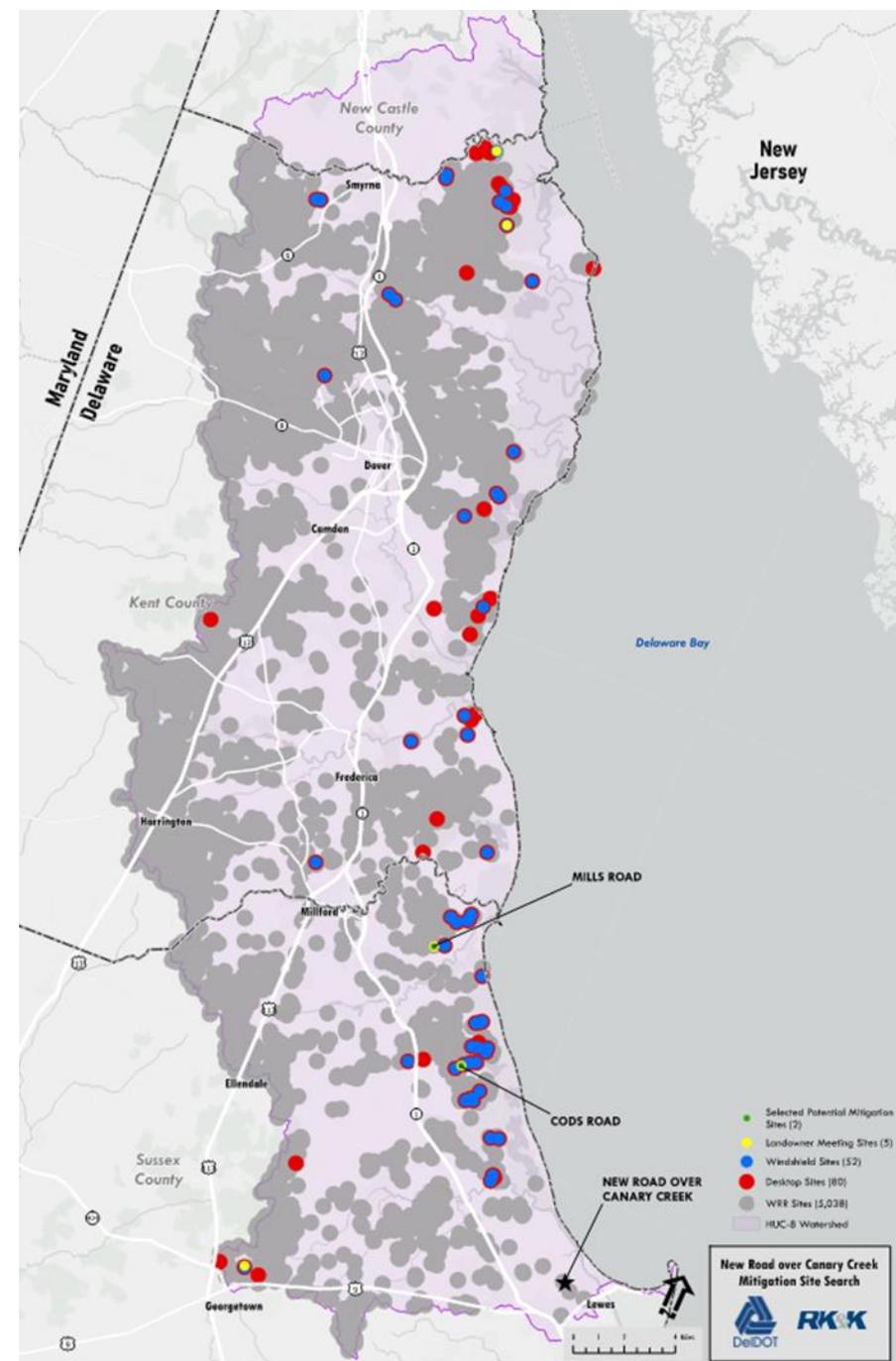


What will a bank do
for DeIDOT?



Control & Time

- Currently each DeDOT project that impacts a wetland is responsible to mitigate for the loss of that wetland through an individual wetland mitigation.
 - This requires finding potential sites
 - Undergoing a wetland investigation to determine if any of those sites are viable
 - Land acquisition
 - Construction of the wetland must be concurrent or prior to the overall project
- The probability of our projects impacting a wetland is increasing.
- The availability of lands ideal for wetland mitigation is decreasing, and increasing in cost



How will it work?

- At first, the same way it currently works!
 - We are required to find potential sites
 - We then undergo a wetland investigation to determine if any of those sites are viable
 - The UMBI is appended with the proposed wetland
 - Land acquisition takes place
 - Construction of the wetland occurs unrelated to existing or proposed projects
 - At which point the wetland will be accepted into the bank, with credits accruing at specific timeframes through the life of the wetland
 - When a DeIDOT project impacts a wetland, those accrued credits may be used to mitigate the impacts without slowing down or impacting the project





There are different *instruments* for different purposes, which *instrument* has hard rocker Alfred Yankovic devoted his career to bring to the attention of his devoted fan base?

- A. Accordion
- B. Pan Flute
- C. Bagpipes
- D. Hammered Dulcimer



